## Amendments to the Specification:

Please replace paragraph [0006] with the following amended paragraph:

[0006] According to one embodiment of the present invention, a method of optimizing a response time for retrieving relevant documents from a set of candidate documents is provided. The candidate documents are identified in response to a search query where the search query includes one or more terms. A term weight is assigned to each of the terms. Documents are associated to a relevance score bin based on a total matched term weight where a document that matches a first total term weight ~~of M~~ is associated to a more relevant score bin than a document that matches a second total term weight that is less than the first total term weight ~~M~~. A set of most relevant documents are then retrieved based on the association to the relevance score bins having a highest relevance score without retrieving other candidate documents.

Please replace paragraph [0007] with the following amended paragraph:

[0007] According to another embodiment of the present invention, an information retrieval system is provided. The system includes logic for processing a search query that has one or more terms. A document retrieval logic identifies candidate documents that match the search query. A ranking logic assigns a term weight to each of the terms and associates each combination of matched term weights to a relevance score range. The ranking logic also groups the candidate documents based on the matched term weight where a document that matches a first total term weight ~~of M~~ is associated to a more relevant score range than a document that matches a second total term weight that is less than the first total term weight ~~M~~. A retrieval logic then retrieves a set of relevant documents associated to the relevance score ranges having a greatest matched term weight without receiving the candidate documents from other relevance score ranges.

Please replace paragraph [0026] with the following amended paragraph:

2

[0026] A final relevance score for a document is a function of the term relevance score and the term weight for each term the document matches. However, before the final relevance score is computed, the ranking logic **135** establishes a relationship between the total term weight matched by a document and a range of final relevance scores that can be assigned to the document. Thus, the term weight is a primary factor for determining the final relevance score of a document. In this manner, a document that matches a <u>first</u> term weight ~~of M~~ from the query will always have a greater relevance score than a document that matches a <u>second</u> term weight <u>that is</u> less than <u>the first term weight</u> ~~M~~. This is described in greater detail below. As a result of this relationship, the most relevant documents can be identified without having to compute the relevance scores of the entire set of candidate documents. Thus, a small set of most relevant documents can be retrieved without having to retrieve the entire set of candidate documents thereby increasing response time.

Please replace paragraph [0039] with the following amended paragraph:

[0039] <u>In equation(1) above, let Si represent the score produced by an individual term or branch of a query, let Wi represent the weight assigned to an individual term or branch and let sum(Wi) represent the mathematical sum of the weights Wi assigned to individual terms.</u> As described above, using a total scoring range of 0-100, it is split into equal sized bins (or substantially equal size) as a function of the sum of term weights. For example, <u>it can be based on (sum of term weights)/(gcd of weights) where "gcd" is the greatest common denominator. Using the gcd allows the system to find an optimal size of score bin. Based on the total term weight a document matches, the relevance score for the document is confined within a specific bin.</u> Based on the scores for individual terms, the relevance score of the document is placed at a specific position within the bin. The value of a' determines which score range (bin) a document is assigned to and the value of b' determines the position of the document within that bin. Of course, other relationships can be used and will be appreciated by those of ordinary skill in the art.

Please replace paragraph [0044] with the following amended paragraph:

[0044] It will be appreciated by those of ordinary skill in the art that other scoring formulas can be used. The principle association is to associate a document's matched term weight to a particular score range. It will also be appreciated that the sequence of processing described above is only for exemplary purposes and that other sequences can be implemented. It will further be appreciated that the present invention is not limited to the text/information retrieval domain. Rather, it applies to any domain where the final ranking of an object depends on one or more of its attributes whether equally or unequally weighted). If some of the attributes can receive a score of zero for some of the objects, the present invention will work as well. In this manner, the information retrieval system 100 would be generically an object retrieval system.

Please replace the abstract with the following amended abstract:

A method and system for optimizing response time for data query rankings and retrieval is provided. In response to a received search query that contains one or more terms, an information retrieval system identifies a candidate set of documents that match any of the terms. ~~Each term is~~ Terms are assigned a term weight making ~~it~~ them more or less relevant in relation to ~~the~~ other terms. A ranking logic defines score bins from a total score range based on possible matched term weights. A relationship is established that classifies a document into a ~~specific~~ score bin based on a sum of term weights from matched terms. ~~In this manner, documents~~ Documents that match more term weights ~~are guaranteed to~~ have higher total relevance scores than documents that match less term weights. ~~As a result, the~~ The most relevant documents are retrievable without having to retrieve the entire set of candidate documents and without having to compute total relevance scores for all the candidate documents. ~~With the present invention, query response time and accuracy of search results are improved.~~

4